Missouri Nursery Pest News

Office of the State Entomologist
Missouri Department of Agriculture, P.O. Box 630, Jefferson City, MO 65102
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For more information contact:
Plant Pest Control Bureau
Voice: (573) 751-5505
FAX: (573) 751-0005
Or your local Plant Protection Specialist

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Sudden Oak Death (SOD) Update

As part of the national survey for SOD, twenty-five nursery locations in Missouri were specifically examined for symptoms of SOD and samples collected for laboratory analysis. These locations were selected to represent different regions of the state and included all known recipients of potentially infected stock from Monrovia Nurseries (Azusa, CA). Over 600 samples have been collected. To date, no positive SOD samples have been confirmed in Missouri. For updated information on this developing situation and a complete listing of the known host and associated host plants check the following web sites:

California Oak Mortality Task Force: http://www.suddenoakdeath.org
USDA-APHIS-PPQ Sudden Oak Death: http://www.aphis.usda.gov/ppq/ispm/sod/

A requirement of current quarantine measures states that all shipments of host plants and associated host plants arriving from California must be accompanied by documentation/ certification that they have been found free of SOD. If symptoms are observed on any host or associated host plants please contact the Missouri Department of Agriculture immediately.

Recent Observations from the field

Small bagworms were reported in central and east-central parts of the state. Careful inspection of susceptible plants (spruce and other evergreens, in particular) is recommended as these damaging pests are much easier to control now, before significant damage is done.

Adult roundheaded appletree **borers** were observed and other borers were preparing for emergence. Insecticide applications to prevent infestation of susceptible trees are suggested at this time. There are formulations of Dursban still on the market for control of borers *in nurseries*.

Other insect activity to be on the look-out for at this time: Black Vine Weevil, Euonymous Scale, European Pine Shoot Moth, Mimosa Webworm, San Jose Scale, and Wooly Apple Aphid.

For more information:

Orton, Donald A., Coincide: The Orton System of Pest Management, Plantsmen's Publications, 1989.
Weather data: http://agebb.missouri.edu/weather/stations/index.htm

Euonymus Scale
Unaspis euonymi
Homoptera: Diaspididae

I. DESCRIPTION
- Adult female has a dark shell and is about 1/16 inch long.
- Adult male is two-winged and emerges from its armor for mating.
- Immature males are elongate and white.
- Eggs and crawlers are orange-yellow.

II. HOSTS
- All euonymus are susceptible.
- Other hosts include: *Celastrus*, *Ilex*, *Camellia*, *Ligustrum*, *Olea*, *Lonicera.*

III. DAMAGE
- Feeding damage caused by nymphs and adults sucking plant fluids. May cause leaf drop. If the infestation is heavy enough, stems can be girdled and killed.

IV. LIFE CYCLE
- Overwinter as fertilized female adults.
- In mid-April, eggs are laid under the females shell.
- Nymphs hatch in late May and early June and are dispersed by crawling or are wind blown.
- A second generation hatches in late July to mid-August.

V. INSPECTION TIPS
- Yellow spots on leaves.
- White males become apparent. Brown females can be seen upon closer observation.

VI. CONTROL TIPS
- Apply a dormant oil before bud break.
- One of the following may be applied in late May or early June to control crawlers (susceptible stage): Fyfanon, Dursban, Guthion, Malathion, Turcam, Orthene, Closure 76WP, Dimethoate, Acephate, Azinphos-M.50W, Know-Out NL or Precision.

VII. COINCIDE TIMING
- Treat crawlers beginning when *Catalpa speciosa* are in early bloom. Repeat four times at 10-12 day intervals.

ROUNDHEADED APPLETREE BORER

Saperda candida

Coleoptera: Cerambycidae

I. DESCRIPTION: Roundheaded appletree borer

- Adult is a long-horned beetle 15-20 mm in length, cinnamon-brown with two broad, white stripes extending the length of the body
- Antennae about as long as the body
- Larva is a creamy-white legless grub with a brown head and large black mandibles 30-40 mm in length when mature

II. HOSTS: Roundheaded appletree borer

- Apple (Malus) is strongly preferred, especially CRABAPPLE in the nursery and landscape setting

III. DAMAGE: Roundheaded appletree borer

- Attack normally confined to the base of the trunk
- Feeding galleries cause structural weakness, making trees prone to breakage

IV. LIFE CYCLE: Roundheaded appletree borer

- Overwinters as various stage larvae within the tree
- Adults begin emerging in late spring (about time of petal drop) and continue for about 4 weeks
- Eggs are laid on the trunk within 15 cm of soil
- Newly hatched larvae begin feeding on inner bark
- In MO, life cycle requires two years

V. INSPECTION TIPS: Roundheaded appletree borer

- Off-color foliage on infested trees
- Pellets of REDDISH-BROWN GRANULAR FRASS on the ground next to trunk and extruding from small holes in the bark
- Perfectly round adult emergence holes on the trunk within 15 cm of soil line

VI. CONTROL TIPS: Roundheaded appletree borer

- Will attack healthy trees
- Shading the trunks with plastic trunk guards may help limit attacks
- Chemical controls (Dursban) applied two weeks after adult emergence begins and again after residual activity subsides. (Period of protection: May-July)

VII. COINCIDE TIMING: Roundheaded appletree borer

- Begin treatment as Philadelphus (Mockorange) blooms (DDB50: 500-600)
- Last applications as Hydrangea arborescens 'Grandiflora' blossoms are turning from white to green (DDB50: 1600-1700)